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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,587	03/22/2004	Robert B. Dybdal	700700-025	4123

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EXAMINER

ALSOMIRI, ISAM A

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/807,587

Applicant(s)

DYBDAL ET AL.

Examiner

Isam Alsomiri

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-10, 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-13 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 11-13 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Shapira et al. US 20030162566A1. Referring to claims 11 and 13, Shapira discloses in figures 1 and 18 a method for antenna tracking, comprising: processing/weighting orthogonally polarized tracking channel components of an incident signal to make a determination as to which of the orthogonally polarized tracking channel components is stronger (see page 1 [0008 and 0048]); and using the determination to select a polarization of a data channel to reduce a polarization mismatch loss (see Abstract).

Referring to claim 12, Shapira teaches determining which of two orthogonal polarization components of an incident signal is a stronger signal component (see page 1 [0008]); summing sequentially detected orthogonal polarizations to provide a tracking input; and selecting a polarization of a data channel depending upon the stronger signal component (see page 5 [0065]).

Referring to claim 16, Shapira teaches the means for detecting orthogonally polarized signals of a tracking channel, determining which of the orthogonally polarized signals is stronger, and suppressing a cross polarization response of the tracking channel includes a tracking receiver configured to switch between tracking channel inputs for the orthogonally polarized signals and to generate sequential orthogonal polarization outputs, and a sequential summer configured to receive the sequential outputs and to provide an antenna control unit input signal and wherein the controller is configured to select the polarization of the data channel based on the higher signal level from the sequential orthogonal polarization outputs (see [0008] [0065 – 0077]).

Response to Arguments

Applicant's arguments filed January 24, 2006 have been fully considered but they are not persuasive. Regarding claims 11 and 12, applicant argues that Shapira does not disclose or suggest "processing orthogonally polarized tracking channel components of an incident signal to make a determination as to which of the orthogonally polarized tracking channel components is stronger; and using the determination to select a polarization of a data channel to reduce a polarization mismatch loss". In response:

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Shapira teaches "FIG. 1 illustrates a receive portion of a BS antenna system 100 employing polarization-diverse receive antenna elements 102, 104. The receive elements 102, 104 are configured to accommodate two opposing (i.e. orthogonal) linearly-slanted polarized states...the signals received by both types of antenna elements 102, 104 are applied to a diversity combining circuit 106, which determines a maximum value in a preferred signal parameter (e.g. signal-to-noise ratio, SNR) between the two signals received from antenna elements 102, 104". Therefore, it is clear that Shapira teaches the orthogonally polarized channel components and reducing a polarization mismatch loss by selecting a stronger polarization SNR. Furthermore, Shapira does teach summing sequentially polarizations to provide a tracking input (see [0066 – 0068]. Regarding claims 13 and 16, applicant argues similar arguments as above plus the limitation of "suppressing a cross polarization response of the tracking channel". In response: Shapira does teach suppressing cross polarization because the objective of his system is to match a user or polarization with the maximum gain possible (see [0156 – 0162]).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited to (Kurokami; Cook, Jr.; Fitzsimmons et al.; T.R. fouts et al.) show various antenna tracking systems including suppressing cross polarization interference.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

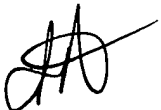
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam Alsomiri whose telephone number is 571-272-6970. The examiner can normally be reached on Monday-Friday 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isam Alsomiri



February 27, 2006



THOMAS H. TARCZA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600